

## The discovery of the Southern Spider-orchid *Caladenia australis* G.W. Carr in Tasmania in 1968 and the later searches

John Whinray

Flinders Island, Tasmania 7255

### Abstract

A single plant of the Southern Spider-orchid *Caladenia australis* G.W. Carr was collected beside Lady Barron foreshore on Flinders Island in November 1968. It remains the sole Tasmanian record to date. The species is scheduled under the Tasmanian *Threatened Species Protection Act 1995* as endangered. Its Tasmanian habitat is described and the later searches for the species are dealt with. The restricted occurrence of four other Spider-orchids, each also found just once on Flinders Island, is detailed. (*The Victorian Naturalist* 131 (2) 2014, 40–43)

**Key Words:** Flinders Island, endangered and extinct Tasmanian orchids

### Locality and Habitat

Lady Barron is the south-eastern village of Flinders Island. Its coast is mainly granite and the land rises gradually to the twin knolls—also granite—of Vinegar Hill. Both are about 80 m high. Parts of the hill have a veneer of very old, planed-down sand dunes.

The foreshore of the core of the village is granite and Water-rock Point—at the western end of Yellow Beach—has a large, low granite outcrop that rises only about a metre above the local slope. Most of its margin shelves gradually and so carries soil that starts as very shallow and then increases in depth to a varying degree. For a period the outcrop was prepared as a water-rock but its small dam was destroyed when a bulldozer cleared the rock's southern base.

The fringing vegetation—where it has not been destroyed by later clearing—is mainly Rock Tea tree *Kunzea ambigua*, a hardy shrub that tolerates the often drouthy conditions of the shallow edges of granite outcrops on Flinders and Cape Barren Islands. The rock and its fringe are about 20 by 15 m. A single plant of a Spider-orchid, *Caladenia* sp., was collected on an edge of the outcrop on the 9 November 1968. It was recorded at the time as 'not *clavigera*'. It had one flower and the leaf had been eaten. There were no shrubs in the understorey of the Rock Teatree. The extra orchids present were the Mayfly Orchid *Acianthus caudatus* and Maroonhood *Pterostylis pedunculata*. The other herbs were Small Poranthera *Poranthera microphylla*, Austral Carrot *Daucus glochidiatus*, Errienellam *Drosera auriculata*, Silvery Hair-

grass *Aira caryophyllea*, Flat-weed or Bear's-ear *Hypochoeris radicata* and a Fescue *Vulpia* sp. The asterisks mark the exotic plants. The Rock Teatree gave way to Paperbark *Melaleuca ericifolia*, Smooth Teatree *Leptospermum laevigatum* and Cape Barren Pine *Callitris rhomboidea* in the deeper soil just west of the edge of the outcrop.

The specimen from Lady Barron became the Southern Spider-orchid *Caladenia australis* when Carr (1991: 2-3) named the species (Fig. 1).

### The Searches of Vinegar Hill

As there was no later trace of the Southern Spider-orchid at the remembered site, the author decided to search Vinegar Hill as a last resort. Only six of the 15 rambles to the hill between 1997 and 2000 were made at a time when *caladenias*, other than the common Pink Fingers *Caladenia carnea*, could be determined. Larger leaves, including those of Spider-orchids, were found. The commonest leaf belonged to the Green-comb Spider-orchid *Caladenia dilatata*. About a hundred plants were examined when flowering or when their buds were large enough to be examined. They occurred where the understorey was open or where shrubs were dominant but not dense. These spots included the mid south-western slope of the western knoll, the northern slope of both knolls and an area of gently sloping stone and shallow soil, with Rock Teatree, on the upper eastern side of the summit's knoll.

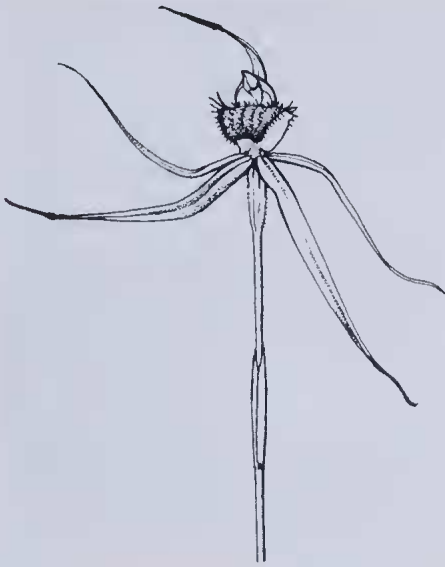


Fig. 1. Southern Spider-orchid *Caladenia australis*. Reproduced with permission from Walsh and Entwistle (1994: 783).

Pink Fairies *Caladenia latifolia* formed a tiny patch, of about 12 plants, on the upper south-western slope of the western knoll. Hare's Ears *Leptoceras menziesii* occurred in a small pocket of shallow soil of a swelling outcrop of the mid south-western slope of the western knoll and in the shallow soil of two outcrops that just broke the surface on the upper northern slope, and one on the upper southern slope, of that knoll. The final site was amongst scattered small granite blocks on the mid northern slope of the hill. The only prior record of Hare's Ears for Flinders Island was a collection made beside North Pats River on the author's bush block after the bush-fire of late January 1966.

#### The site in 2009

The water-rock had been visited at least eight times since the collection was made but it was not until late in 2009 that the field notes, and sketch-map, of 1968 were examined carefully. Before that the remembered site and vicinity of the Southern Spider-orchid, some distance away from the actual site, were checked.

It seems likely that the water-rock had been burnt a few years prior to the visit of late 1968.

The sketch-map drawn then showed the stone to be more extensive than is obvious now. The Rock Teatree had reached over six metres in height by 2009. There was no trace of any Spider-orchid plants within 10 metres of the mapped site. Green-comb Spider-orchids were found about 20 metres east in shallow soil under Rock Teatree. This species was sketched in the field notes of 1968 and has been recorded on many occasions since then.

At the time of collection, the water-rock was part of a Crown land block between Pot Boil Road—the first road to the north—and the foreshore. It was then leased and cleared except for the rock and most of its fringe. Subsequently the block was subdivided in three, and sold, by the Lands Department. The rock forms the southern end of the central block. Its south-eastern edge was cleared when a vehicular track was run to the west at about a third of the way up from the outcrop's southern end.

The rock and its fringing Teatree had the richest orchid flora that the author has found on any small area of the 100 islands visited so far in Banks and eastern Bass Straits. The 18 species are listed in the Appendix to preserve, on paper, the names of plants that are all likely to perish through clearing—some wood-cutting has been done recently—and the continuing influx of weeds.

#### The final searches

Thirteen visits were made to Water-rock Point between 18 July and 2 December 2012. Seven of the eight sites of Spider-orchid leaves were novel to the author, and all were checked repeatedly. The number of plants that could be identified at a site ranged from one to 32. The smallest site held five leaves and two budding plants. The author covered the latter with branches but, during a later inspection, one lot was not replaced carefully and the plant's stem and bud were eaten. The other plant flowered later. Eighty-two plants could be determined and all were Green-comb Spider-orchids. Twenty-two other plants formed only leaves. A further four formed stems and buds but the latter were so small when the plants shrivelled that they could not be determined. One plant that might have developed was nibbled. Three budding plants that were not covered beside

one site disappeared without the slightest trace. The identified plants greatly outnumbered the others and so it seems likely that the latter were probably the same species.

Water-rock Point was visited on 26 October, and twice in late November 2013. A few novel sites of spider-orchids were found, mainly on the foreshore. As well, several known occurrences had more flowers than last year. The new plants that could be named totalled 46 and all were Green-comb Spider-orchids. The closed flowers of two plants could not be determined. One was in a group of six flowering Green-Comb Spider-orchids. The other was part of a small patch of one flowering Green-comb Spider-orchid and eight spider-orchid leaves. The new records brought the number of plants that could be identified in 2012 and 2013 to 128. So the Southern Spider-orchid is still elusive and that seems unlikely to change.

### The Australian mainland range of the Southern Spider-orchid

In Victoria, according to Backhouse and Jeanes (1995: 56), the species: 'Favours woodlands and open forests, usually with a heathy understorey. Substrates are well-drained sand and clay loams.'

Later Jeanes and Backhouse (2006: 49) noted that the orchid occurs '...in coastal and hinterland areas of southern Victoria, east from Port Campbell, growing in heath, heathy woodland and lowland forest.' They added that it is a '...rare, poorly known orchid ...'

### Discussion

Spider-orchids, other than the Blunt-tipped Spider-orchid *C. clavigera*, seem to be either very rare or very restricted in their range on Flinders Island. The author has found the Green-comb Spider-orchid at only two sites away from the Lady Barron-Vinegar Hill area. Several populations were recorded on the old consolidated dune that forms the northern shore of Bennetts Lagoon. There are also about 50 plants amongst Rock Teatree on shallow soil beside the track to Strzelecki Peaks where it passes through the freehold land by the western boundary of Strzelecki National Park.

Lady Barron foreshore was first visited by the author in September 1965 and the very sparse

notes—several common orchid genera were not even known by him at that time—include a Spider-orchid. The specimen was examined by JH Willis at the National Herbarium of Victoria on 6 June 1966. He remarked that it was 'Apparently *Caladenia patersonii* (Common Spider-orchid), but a poor, battered specimen. If there were clubs on the end of the sepals, it would be a form of *C. reticulata*'. CSIRO botanist Dr Mark Clements agreed with this assessment when he examined the specimen after it was lodged at the Australian National Herbarium (CANB) (Jo Palmer, pers. comm., 22 November 2012). This fading specimen was another reason for the searches of Water-rock Point in late 2012. As the Southern Spider-orchid *C. australis* could be assigned to a form of *C. reticulata*, the September 1965 specimen might have been the former species. There are no certain records of *C. patersonii* for Flinders Island (Jones *et al.* 1999).

Three other Spider-orchids have been found just once on Flinders Island. Archdeacon Atkinson collected Daddy Long-legs *Caladenia filamentosa* and the Tailed Spider-orchid *C. caudata* in October 1947. The local clergyman HG Biggs found the Heart-lipped Spider-orchid *C. cardiochila* in the same month. His specimen remains the sole Tasmanian record to date and—being found so long ago—the orchid is scheduled, under the Tasmanian *Threatened Species Protection Act 1995*, as extinct. All three labels give the localities as just 'Flinders Island'. This is disappointing as most of the island had been named by then. The specimens are held under number 1947B by the Queen Victoria Museum and Art Gallery in Launceston. As a child, Jan Cooper, of Flinders Island, made one excursion with the collectors. She can recall them becoming very excited about an orchid found west of The Long Straight in the Blue Rocks district. She does not recall the vicinity as being uncleared bush (Jan Henning, pers. comm. 12 April 2013). Jones *et al.* (1999) mapped the three 1947 specimens at the same spot in north-eastern Flinders Island but noted only that the actual site of the Heart-lipped Spider-orchid is unknown.

### The Status of the Southern Spider-orchid

The Southern Spider-orchid is still known for certain by just the single plant collected near

Lady Barron foreshore in November 1968. The species is scheduled, under the *Threatened Species Protection Act 1995*, as endangered in Tasmania. If it is not found again by November 2018, it will be classed as extinct in the State. On present indications, it seems likely to attain that regrettable status.

### The Specimen

9.xi.1968, Beside Lady Barron foreshore, Flinders Island at 0606594, 5547886; 40° 12' 45.7", 148° 15' 09.5" (Datum: AGD66; estimated error: 5 metres). John Whinray C 1968, CANB 342227.

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Maureen Christie provided support and assistance from 1967 to 1972. The 16 visits of 2012 and 2013 to Lady Barron foreshore were all made using a vehicle kindly lent by some members of the Liapota Co-operative. Jo Palmer, of CANB, supplied various details

about my specimens of the Southern Spider-orchid and *Caladenia patersonii* / *reticulata*. Jill Thurlow, of MEL, forwarded several useful photocopies. Dr Mark Clements, of the Centre for Australian National Biodiversity Research, and Jeffrey Jeanes, of MEL, determined some orchid specimens from the water-rock. The many drafts of this note were typed at the Online Access Centre on Flinders Island.

### References

- Backhouse GN and Jeanes J (1995) *The Orchids of Victoria*. (The Miegunyah Press: Carlton, Victoria)  
 Carr GW (1991) New taxa in *Caladenia* R.Br., *Chiloglottis* R.Br., and *Gastrodia* R.Br. (Orchidaceae) in south eastern Australia. *Indigenous Flora & Fauna Association Miscellaneous Paper* No. 1.  
 Jeanes J and Backhouse G (2006) *Wild Orchids of Victoria Australia*. (Aquatic Photographics: Seaford, Victoria)  
 Jones D, Wapstra H, Tonelli P and Harris S (1999) *The Orchids of Tasmania*. (The Miegunyah Press: Carlton, Victoria)  
 Walsh NG and Entwistle TJ (1994) *Flora of Victoria*. Vol 2. (Inkata Press: Melbourne)

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### Appendix: A list of the orchids of Lady Barron Water-rock

Note that the many plants of *Caladenia latifolia* were wiped out when the rock's dam was destroyed. The species has not been found elsewhere on Water-rock Point. There is now no trace of either a *Corybas* sp. or a *Cyrtostylis* sp. at or beside the water-rock. The species that survive on the point's foreshore are listed in their stead. Before the local record was made, *Thelymitra imbricata* was assessed as endemic to the Midlands region of the Tasmanian mainland (Jones *et al.* 1999: 273).

*Acianthus caudatus*  
*Acianthus pusillus*  
*Caladenia australis*  
*Caladenia dilatata*  
*Caladenia latifolia*  
*Corybas fimbriatus*  
*Cyrtostylis robusta*  
*Diuris orientis*  
*Microtis arenaria*

*Pterostylis concinna*  
*Pterostylis melagramma*  
*Pterostylis nutans*  
*Pterostylis pedunculata*  
*Thelymitra arenaria*  
*Thelymitra flexuosa*  
*Thelymitra rubra*  
*Thelymitra juncifolia*  
*Thelymitra imbricata*

## One Hundred Years Ago

The Mallee: Ouyen to Pinnaroo.

Botanical notes

By A.D. HARDY

At 9.30 we were in a fine basin to the south-west of Mount Gnarr, where, in a shallow catchment, we found water, with Cane-grass and Nardoo. Here were signs of improved water storage—old but unmistakable traces—and we felt we were on the eve of further discovery. The depression was fringed with mallee scrub and pine. Ascending the further rim, we came upon the old ruins of a hut and pine-log yards, with abundant thistles, and sheep-droppings in and about the place. Here was, about 30 years ago perhaps, an out-station of a homestead on the Murray, but abandoned through failure of the water supply. "Old hut and yards" was the name for a point on the Sunset Track where we had camped the previous night, and where, according to legend, some ruins had once been seen.

From *The Victorian Naturalist* XXX, p. 157, January 8, 1914